

CS210 – Machine Problem 5

Zombie Translator

20 Points

Assigned: March 13–14, 2017

Due: March 20–21, 2017

Although many believe that zombies have given up all rational thought and are driven solely by an innate need to consume brains, several fringe linguists have determined that the zombies actually have a rudimentary form of speech. What appears to the human ear to be groans, mutterings, and death rattles, are, in reality, communication.

Due to their diligent research, and at the cost of not a few lives. We now have the ability to communicate with the undead.

Translation Rules

Here are the rules, as best linguists understand them, for converting English into Zombie (in order of execution):

- All occurrences of characters “eiou” (case-insensitive) are replaced with “r”.
- All characters other than “zhrghbmna .!?-” (case-insensitive) are stripped.
- Lower-case “r” at the end of words replaced with “rh”.
- An “a” or “A” by itself will be replaced with “hra”.
- Capitalization should be retained.

Project

Your project is to write an English to Zombie translator that will take entire blocks of text and translate them. You may assume that each block of text will be no more than 1000 characters. It is recommended that you write the following functions in the following order:

- `translate_word` – Takes a single English word and passes back the Zombie translation of that word.
- `translate_nonword` – Takes a sequence of non-word characters and passes back the Zombie translation of those characters.
- `get_next_word` – Takes a sentence (in English) and an index into that sentence, and passes back the next word starting at that index.
- `get_next_nonword` – Takes a sentence (in English) and an index into that sentence and passes back the sequence of non-word characters starting at that index.
- `translate` – Takes an entire English sentence and passes back an entire Zombie sentence.
- `main` – Prints the title and loops asking the user for a sentence, checks to see if it’s DONE, otherwise prints the translation of the sentence.

Sample Run

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English-to-Zombie Translator
Enter text to translate, DONE if finished:
The quick brown fox jumped over the lazy dog.
Translation:
Hrh rrh brnn rh rmrh rrrh hrh az rg.
English-to-Zombie Translator
Enter text to translate, DONE if finished:
A man, a plan, a canal, Panama. Palindrome!
Translation:
Hra man hra an hra ana Anama. Arnrrmrh!
English-to-Zombie Translator
Enter text to translate, DONE if finished:
In a galaxy, far, far, away.
Translation:
Rn hra gaa arh arh aa.
English-to-Zombie Translator
Enter text to translate, DONE if finished:
I want to eat your brain. Please comply. Thank you.
Translation:
Rh an rh ra rrrh brarn. Rarh rm. Han rrh.
English-to-Zombie Translator
Enter text to translate, DONE if finished:
DONE
```